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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,954	03/19/2002	Kazuhisa Mori	500.41483X00	6337

20457 7590 07/11/2003

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EXAMINER

LAXTON, GARY L

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/099,954

Applicant(s)

MORI ET AL.

Examiner

Gary L. Laxton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11, 13 and 14 is/are allowed.
- 6) ☒ Claim(s) 12, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Koichi (JP7170723 – supplied by applicant).

Concerning claim 12, Koichi discloses a power converter comprising: a semiconductor circuit including a first semiconductor switching device (figures 1-7: 1) and a second semiconductor switching device (2) each having a main terminal and a control terminal, and electrically connected to each other; a main circuit wiring including a plurality of tabular conductors (figure 5: 4, 5, 6) arranged at least in partially superposed relation with each other, a main circuit current

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of said semiconductor circuit flowing in said main circuit wiring; a first control signal line (14) for supplying a first control signal to said control terminal of said first semiconductor switching device (1); and a second control signal line (14) for supplying a second control signal to said control terminal of said second semiconductor switching device (2); wherein respective junction (figure 2 or 7: 16 or 17 or 18) between each of said first and second control signal lines (14) and the circuit portion of said semiconductor circuit is in opposite relation to selected one of an area of said main circuit wiring where said main circuit current flows and said plurality of said tabular conductors are in superposed relation to each other, and wherein that portion of each of said first and second control signal lines which is in opposite relation to only one of said tabular conductors with said main circuit current flowing therein, is constituted of selected one of a twisted wire and a shielded wire (figure 2 or 7: 14).

Concerning claim 15, Koichi discloses a power converter comprising: a semiconductor circuit including a semiconductor switching device (1 or 2) having a main terminal and a control terminal; a main circuit wiring (4, 5, 6) including a plurality of tabular conductors arranged at least in partially superposed relation to each other (4, 5, 6), the main circuit current of said semiconductor circuit flowing in said main circuit wiring; and a control signal line (14) for supplying a control signal to said control terminal of said semiconductor switching device; wherein each junction between said control signal line and the circuit portion of said semiconductor circuit (figure 2 or 7: 16 or 17 or 18) is in opposite relation to selected one of an area of said main circuit wiring where said main circuit current flows and said plurality of said tabular conductors are in superposed relation with each other; and wherein the portion of said control signal line which is in opposite relation to only one of said tabular conductors in which

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the main circuit current flows, is formed of selected one of a twisted wire and a shielded wire (figure 2 or 7: 14).

Concerning claim 16, Koichi discloses a power converter comprising: a semiconductor circuit including a semiconductor switching device(figures 1-7: 1 or 2) having a main terminal and a control terminal; a main circuit wiring (4, 5, 6) including a plurality of tabular conductors arranged at least in partially superposed relation to each other (4, 5, 6) the main circuit current of said semiconductor circuit flowing in said main circuit wiring; and a control signal line (14) for supplying a control signal to said control terminal of said semiconductor switching device; wherein said control signal line (14) crosses an end of an area of said main circuit wiring where said main circuit current flows and said plurality of said tabular conductors are in superposed relation to each other (figure 2 or 7), between the side of said main circuit wiring (4, 5, 6) where said semiconductor switching device (1 or 2) is located and the opposite side of said main circuit wiring (figure 2 or 7).

Allowable Subject Matter

5. Claims 1-11, 13 and 14 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

Concerning claims 1-11, prior art fails to disclose or suggest, inter alia, a power converter wherein the sum of the length of that portion of each of a first control signal line and a second control signal line which is opposite to an area of a main circuit wiring where the main circuit

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current flows and where a plurality of said tabular conductors are in superposed relation to each other, the length of that portion of each of the first control signal line and the second control signal line in opposite relation to an area of the main circuit wiring where main circuit current does not flow, and the length of that portion of each of the first control signal line and the second control signal line which is located outside an end of the main circuit wiring, is substantially equal to the total wiring length of each of the first control signal line and the second control signal line.

Concerning claim 13, prior art fails to disclose or suggest, inter alia, power converter; wherein the length of that portion of each of said first and second control signal lines which is in opposite relation to an area of the main circuit wiring where main circuit current flows and a plurality of tabular conductors are in superposed relation with each other, is substantially equal to the total length of the corresponding one of the first and second control signal lines; and wherein the sum of the length of that portion of each of the third and fourth control signal lines which is in opposite relation to an area of the main circuit wiring where main circuit current does not flow and the length of that portion of the corresponding one of said third and fourth control signal lines which is located outside an end of the main circuit wiring, is substantially equal to the total length of a corresponding one of the third and fourth control signal lines.

Concerning claim 14, prior art fails to disclose or suggest, inter alia, a power converter; wherein the sum of the length of that portion of a control signal line which is in opposite relation to an area of a main circuit wiring where main circuit current flows and where a plurality of tabular conductors are in superposed relation with each other, the length of that portion of the control signal line which is in opposite relation to an area of the main circuit wiring where main circuit

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current does not flow, and the length of that portion of said control signal line which is located outside an end of the main circuit wiring, is substantially equal to the total wiring length of the control signal line, and wherein that portion of the control signal line which is in opposite relation to only one of the tabular conductors in which main circuit current flows, is formed of selected one of a twisted wire and a shielded wire.

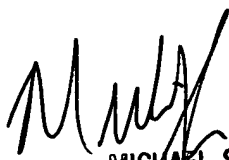
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (703) 305-7039. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (703)308-1680. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7724 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

GLL
June 30, 2003


MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800
11/30/03